



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,241	03/17/2004	John F. Fritskey	VSSZ 2 00011	5143
27885	7590	07/19/2006	EXAMINER	
FAY, SHARPE, FAGAN, MINNICH & MCKEE, LLP 1100 SUPERIOR AVENUE, SEVENTH FLOOR CLEVELAND, OH 44114			PHILLIPS, FORREST M	
			ART UNIT	PAPER NUMBER
			2837	

DATE MAILED: 07/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/802,241

Applicant(s)

FRITSKEY ET AL.

Examiner

Forrest M. Phillips

Art Unit

2837

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/17/04.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claims 9-10 are objected to because of the following informalities: claim 9 is dependant upon claim 1 claim 10 is dependant upon claim 9 which is dependant upon claim 1. In claim 10 there is made reference to the "ribs", a structure which is not brought in until claim 2, as such the claims have been treated as though they depended upon claim 2 rather than claim 1.

Claim 12 is objected to because it is dependant upon claim 10 which is dependent upon 9/1, in which there is no reference made to a plate. The plate is not brought into the claims until claim 11. Claim 12 will be treated as though it were dependant upon 11.

Claim 17 makes reference to a ring a structure which is not included in claim 14 as such claim 17 has been read as being dependent upon claim 15.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2,5,8,14 rejected under 35 U.S.C. 102(b) as being anticipated by Japanese patent (JP06185356).

With respect to claim 1 the Japanese patent discloses A muffler comprising: a housing having a first section (6 in figure 1) and a second section selectively removable from the first section, the first section including a side wall defining a chamber; a selectively removable insert received in the chamber, the insert comprising, a sound diffuser (5 in figure 2) extending along a longitudinal axis of the housing; and a spacer (14 in figure 2) for spacing the sound diffuser from the side wall of the housing, wherein the spacer abuts the side wall of the housing; and a coupling for selectively attaching the first section of the housing to the second section of the housing (11 in figure 1).

With respect to claim 2 the Japanese patent further discloses wherein the spacer comprises a first rib (15 in figure 2) attached to the sound diffuser, wherein the muffler further comprises a second rib (15 in figure 2) attached to the sound diffuser and spaced from the first rib, wherein the ribs extend approximately parallel to the longitudinal axis of the housing.

With respect to claim 5 the Japanese patent further discloses wherein the second section includes an end wall (16 in figure 1) and a conduit (5 in figure 1) extending away from the end wall, wherein the conduit is in communication with the chamber, wherein the ribs of the removable insert abut the end wall of the tail pipe section when the tail pipe section attaches to the housing.

With respect to claim 8 the Japanese patent further discloses wherein the second section includes an end wall (16 in figure 2) and a conduit (portion of 5 in figure 1 shown

outside of body) extending away from the end wall, wherein the conduit is in communication with the chamber

With respect to claim 14 the Japanese patent discloses A muffler comprising: a housing including a sidewall defining a chamber, a first section (6 in figure 1), a removable second section, an inlet opening (unnumbered pipe on left in figure 2) to allow exhaust to enter the chamber and an outlet opening (opening portion of 5 on the right in figure 2) to allow exhaust to exit the chamber; a selectively removable insert received in the chamber, the insert including a spacing member (14 in figure 2) affixed to a sound diffusing member (portion of 5 with apertures in figure 2), wherein the spacing member engages the side wall of the housing to space the sound diffusing member from the side wall of the housing; and a coupling (11 in figure 2) for selectively attaching the housing first section to the housing second section.

With respect to claim 18 the Japanese patent further discloses wherein the sound diffusing member (5 in figure 2) comprises a cylindrical body including a plurality of holes.

With respect to claim 19 the Japanese patent further discloses further comprising sound altering material (12 in figure 1) interposed between the sound diffusing member and the side wall of the housing.

With respect to claim 20 the Japanese patent further discloses wherein the sound altering material includes fiberglass (paragraph 0002).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2837

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Japanese patent '356 in view of McCurdy (US2222876).

With respect to claim 3 the Japanese patent discloses the muffler of claim 2.

The Japanese patent does not disclose wherein the ribs are rectangular in a cross section taken normal to the longitudinal axis and the ribs attach to the sound diffuser at a narrower side of the ribs.

McCurdy discloses wherein the ribs (9 in figure 1) are rectangular in a cross section taken normal to the longitudinal axis and the ribs attach to the sound diffuser at a narrow side of the ribs.

At the time of the invention it would have been obvious to one of ordinary skill in the art to combine the rectangular cross sectional ribs of McCurdy with the muffler structure of the Japanese patent.

The motivation for doing so would have been to simplify the construction of the ribs.

With respect to claim 4 McCurdy further discloses wherein each rib abuts the sidewall along substantially the entire length of the rib (figure 2).

At the time of the invention it would have been obvious to one of ordinary skill in the art to combine the teachings of McCurdy to have the rib contact the sidewall along the entire length with the muffler structure of the Japanese patent.

The motivation for doing so would have been to add support to the overall structure.

Claim 6, 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Japanese patent '356 in view of Ching-ho (US4890691).

With respect to claim 6 the Japanese patent discloses the muffler of claim 1.

The Japanese patent does not disclose wherein the spacer comprises a ring attached to the sound diffuser oriented normal to the longitudinal axis of the housing.

Ching-ho discloses a spacer comprising a ring (2 in figure 3) attached to a sound diffuser (32 in figure 3) oriented substantially normal to the longitudinal axis of the housing.

At the time of the invention it would have been obvious to one of ordinary skill in the art to combine the ring support structure of Ching-ho with the muffler of the Japanese patent.

The motivation for doing so would have been the simplicity of construction of the ring member as a spacer.

With respect to claim 15 Ching-ho discloses wherein the spacing member (2 in figure 3) comprises a ring oriented approximately normal to a longitudinal axis of the housing.

With respect to claim 16 Ching-ho discloses wherein the ring includes a plurality of tabs (22 in figure 3) extending outwardly.

It would have been a simple matter of rearranging parts to have the ring be central and have the tabs extend outwardly therefrom rather than inwardly therefrom. Their function of support and the creation of flow paths would not have been altered.

It has been held that rearranging of parts of an invention involves only routine skill in the art. In *Re Japikse*, 86 USPQ 70.

Claim 9-10, are rejected under 35 U.S.C. 103(a) as being unpatentable over the Japanese patent '356 in view of Ligman (US5500494).

With respect to claim 9 the Japanese patent discloses the muffler of claim 2.

The Japanese patent does not disclose wherein the sound diffuser comprises a coiled member including an elongated element having at least one of a U-shaped and a V-shaped cross-section.

Ligman discloses wherein the sound diffuser comprises a coiled member (70 in figure 7) including an elongated element. While Ligman does not expressly disclose the U-shaped or V-shaped cross section, as various cross sections of spring are taught by Ligman it would have been obvious to one of ordinary skill in the art to use any cross section for the coiled member.

At the time of the invention it would have been obvious to one of ordinary skill in the art to combine the teachings of Ligman to use a coiled member as a sound diffuser with the muffler of the Japanese patent.

The motivation for doing so would have been the adjustability of the coiled member as a sound diffuser, thus further enhancing the adjustable nature of the muffler of the Japanese patent.

With respect to claim 10 as the stiffener is depicted and understood by examiner to be modified ribs, that have been scaled down to extend only a short length of the coiled member It is understood by examiner that the ribs would serve the same function as the stiffener and as the Japanese patent demonstrates more than 2 ribs the remaining ribs would be able to be shortened and thus result in a stiffener for the end of the coil being provided. This would be a change in size of a component, and it has been held that a change in size is generally recognized as being within the level of ordinary skill in the art. In re Rose, 105 USPQ 237 (CCPA1955).

With respect to claim 11 Ligman further discloses further comprising a plate (92 in figure 8) wherein the plate is situated adjacent an end of the diffuser wherein the plate blocks direct airflow along a longitudinal axis of the sound diffuser.

At the time of the invention it would have been obvious to one of ordinary skill in the art to utilize a plate at the end of the diffuser to force the gas to pass through the diffuser as taught by Ligman. The arrangement of parts resulting from the use of a plate as taught by Ligman would have resulted in the plate being substantially normal to the spacer, as the spacer is substantially parallel to the longitudinal axis of the sound diffuser.

The motivation for utilizing the plate as taught by Ligman would be to ensure that the gas passed through the diffuser before passing out of the conduit and exiting the muffler.

Claims 7 and 21-24 rejected under 35 U.S.C. 103(a) as being unpatentable over the Japanese patent in view of Crowe et al (US3168935).

With respect to claim 7 the Japanese patent discloses the muffler of claim 1.

The Japanese patent does not disclose wherein the coupling comprises a ring-shaped member.

Crowe discloses wherein the coupling (47 in figure 1) comprises a ring shaped member.

At the time of the invention it would have been obvious to one of ordinary skill in the art to combine the ring-shaped coupling member with the muffler of the Japanese patent.

The motivation for doing so would have been to better distribute the clamping load thereby reducing the possibility of unintentional disassembly.

With respect to claim 21 the Japanese patent discloses the muffler of claim 14.

The Japanese patent does not disclose wherein the housing first section includes a flange and the housing second section includes a flange, wherein the flanges abut one another when the first section attaches to the second section and the coupling contacts the flanges.

Crowe discloses wherein the housing first section includes a flange (4 in figure 1) and the housing second section includes a flange (7 in figure 1) wherein the flanges abut one another when the first section attaches to the second section and the coupling contacts the flanges (column 5 lines 27-35).

With respect to claim 22 Crowe further discloses wherein the coupling (47 in figure 1) includes a substantially ring shaped band having a first end (51 in figure 11) that is adapted to be drawn toward a second end (51 in figure 11) when the band is tightened (figure 11).

With respect to claim 23 Crowe further discloses wherein the coupling includes a first side wall and a second side wall, each side wall depending from the ring shaped band, wherein the first sidewall contacts the first flange and the second sidewall contacts the second flange when the coupling attaches the housing first section to the housing second section (column 5 lines 27-35).

With respect to claim 24

The Japanese patent discloses a muffler comprising a housing having a sidewall defining a chamber, the housing including a first section (6 in figure 2) and a removable second section, a selectively removable insert received in the chamber of the housing and a coupling for selectively attaching the housing first section to the housing second section.

The Japanese patent does not disclose wherein each of the first section and the second section includes a flange; wherein the coupling includes a band having a first side wall depending from the band and a second side wall spaced from the first side

Art Unit: 2837

wall and depending from the band, wherein the side walls contact the flanges when the coupling attaches the first housing section to the second housing section and wherein the flanges abut one another when the first section attaches to the second section when the coupling is installed.

Crowe discloses wherein each of a first and second sections of a muffler includes a flange (4 and 7 respectively in figure 1) wherein the coupling (47 in figure 1) includes a band having a first side wall depending from the band and a second side wall spaced from the first side wall and depending from the band, wherein the side walls contact the flanges when the coupling attaches the first housing section to the second housing section and wherein the flanges abut one another when the first section attaches to the second section when the coupling is installed (column 5 lines 27-35).

At the time of the invention it would have been obvious to one of ordinary skill in the art to combine the coupling and flanges as taught by Crowe with the muffler of the Japanese patent.

The motivation for doing so would have been to better distribute the clamping load thereby reducing the possibility of unintentional disassembly.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over the Japanese patent in view of Ligman as applied to claim 10 above, and further in view of Ching-ho '691.

With respect to claim 12 the Japanese patent in view of Ligman discloses the muffler of claim 11.

The Japanese patent in view of Ligman does not disclose further comprising a ring attached to the spacer, wherein the ring is situated adjacent an end of the sound diffuser opposite the plate and the ring is situated substantially normal to the spacer.

Ching-ho discloses comprising a ring attached to the spacer (2 in figure 3) wherein the ring is situated adjacent an end of a sound diffuser (32 in figure 3) opposite a plate (3 in figure 3) whose purpose is to force the gas through the diffusing member, and the ring is substantially normal to the longitudinal axis of flow.

As the spacer of the Japanese patent is parallel to the longitudinal axis of flow the ring would subsequently be normal to the spacer.

At the time of the invention it would have been obvious to one of ordinary skill in the art to combine the teachings of Ching-ho to use a ring as a support member for a sound diffuser with the muffler of the Japanese patent in view of Ligman.

The motivation for doing so would have been the simplicity of construction of a ring for use as a support member.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over the Japanese patent in view of Jones (US3200902).

With respect to claim 13 the Japanese patent discloses the muffler of claim 1.

The Japanese patent does not disclose wherein the insert comprises a first material having a first thermal expansion rate and the housing comprises a material

Art Unit: 2837

having a second thermal expansion rate, wherein the thermal expansion rate is greater than the second thermal expansion rate.

Jones discloses the use of materials having different thermal expansion rates as a means of securing a removable insert inside a muffler housing (column 3 lines 15-21).

At the time of the invention it would have been obvious to one of ordinary skill in the art to combine the teachings of Jones to utilize thermal expansion rates as a means of securing an insert and preventing rattling with the muffler of the Japanese patent.

The motivation for doing so would have been the simplicity of securing the insert, requiring no further attachment means to secure the insert to the walls of the housing, and thus reducing assembly time.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over the Japanese patent in view of Ching-ho as applied to claim 15 in further view of McCurdy.

With respect to claim 17 the Japanese patent in view of Chin-ho discloses the muffler of claim 15.

McCurdy discloses projections in the longitudinal of the muffler, which is normal to the ring as disclosed in Ching-ho, which are used to support the diffusing means.

While McCurdy does not explicitly state the ribs being used to locate the diffusing means in a longitudinal direction it would have been obvious to one of ordinary skill in the art to size these ribs such that they would have sufficed to do so.

Art Unit: 2837

At the time of the invention it would have been obvious to one of ordinary skill in the art to combine the ribs of McCurdy with the ring structure of Ching-ho and incorporate this with the muffler of the Japanese patent.

The motivation for doing so would have been to provide using a known structure means to support the diffuser in both the diametric and longitudinal directions.

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over The Japanese patent in view of Crowe as applied to claim 24 above, and further in view of Ligman '494.

With respect to claim 25 the Japanese patent in view of Crowe discloses the muffler of claim 24.

The Japanese patent in view of Crowe does not disclose wherein the sound diffuser comprises a cylindrical coiled member.

Ligman discloses a sound diffuser comprising a coiled member (70 in figure 7).

At the time of the invention it would have been obvious to one of ordinary skill in the art to combine the coiled member diffuser with the muffler of the Japanese patent in view of Crowe.

The motivation for doing so would have been to further increase the adjustability of the muffler of the Japanese patent in view of Crowe.

Conclusion

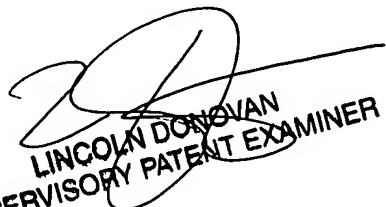
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Radzik (US6533333); Woolsey et al (US2841420); Plemons(US5183976); Lin (US6523866).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Forrest M. Phillips whose telephone number is 5712729020. The examiner can normally be reached on Monday through Friday 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lincoln Donovan can be reached on 5712721988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

FP


LINCOLN DONOVAN
SUPERVISORY PATENT EXAMINER